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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/134,405	08/14/1998	YONG SUNG HAM	8733D-6833	7940
30827 7590 07/12/2007 MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			EXAMINER DUONG, TAI V	
			ART UNIT 2871	PAPER NUMBER
			MAIL DATE 07/12/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/134,405

Applicant(s)

HAM, YONG SUNG

Examiner

Tai Duong

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,4,5,8,9,13,15,16,19,20,25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,4,5,8,9,13,15,16,19,20,25 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 May 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2871

The replacement sheet of Fig. 1B filed on 05/14/2007 has been accepted.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4, 5, 8, 9, 13, 15, 16, 19, 20, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta et al (US 6,266,116) in view of Masaki (US 4,653,859).

Amended claims 5 and 16 additionally recite the *functional* feature "wherein $d_{\Delta n}$ is selected to achieve a desired light transmittance and color-shift". Ohta et al disclose in Fig. 1, Fig. 3, Fig. 31, Fig. 38 and Embodiment 1 an IPS – LCD and a method of making the IPS-LCD, the IPS-LCD comprising the common line CL and the data bus lines DL having a crossing relationship, $d_{\Delta n}$ being 0.316, the (SiNx) passivation layer PSV, the first ORI1 and second ORI2 alignment layers being *polyimide*, the black matrix BM, and the color filter layer FIL (col. 8, line 66 – col. 9, line 55; col. 11, line 20-col. 12, line 17; col. 16, lines 1-31; col. 17, lines 46-50). Thus, the only difference between the IPS-LCD of Ohta'116 and that of the instant claims is the first alignment layer comprising one of SiQ_x, polyvinyl alcohol (PVA) and polyamic acid. Masaki discloses that it was common in the art to employ PVA, SiQ_x and polyimide formed from polyamic acid as the alignment layer (col. 4, lines 5-12; col. 5, lines 1-62). Thus, it would have been obvious to a person of ordinary skill in the art to employ PVA, SiQ_x and

polyamic acid as the alignment layers in Ohta's device and method for uniformly aligning the liquid crystal molecules because these alignment materials are art-recognized equivalents for the same purpose, as disclosed by Masaki.

As to the *functional* feature "wherein $d \cdot \Delta n$ is selected to achieve a desired light transmittance and color-shift, this feature is inherent with the IPS-LCD of Ohta et al because the $d \cdot \Delta n$ of Ohta's device is $0.316 \mu\text{m}$, as evidenced by the instant disclosure (page 9, lines 7-11), Ohe et al (US 5,910,271) of record, and the JP 06-160878 cited by Applicant. See Fig. 12(b) and paragraphs 0082 and 0084 of the JP 06-160878 that show a desired light transmittance and color-shift can be achieved by selecting the corresponding $d \cdot \Delta n$. Ohe et al disclose in column 6, lines 50-55, the $d \cdot \Delta n$ of $0.30 \mu\text{m}$ for attaining a higher transmission index (desired light transmittance) and a whiteness (desired color-shift) of the display emission light.

In addition, it has been held that "[W]hile features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of *structure* rather than *function*. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997). See MPEP 2114, page 2100-56.

Applicant's arguments filed 05/14/07 have been fully considered but they are not persuasive for the above-mentioned reasons.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication should be directed to Tai Duong at telephone number (571) 272-2291.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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TVD

07/07

TOAN TON
PRIMARY PATENT EXAMINER